

REMARKS

Applicants respectfully request that the Examiner reconsider the present application. In the present reply, claim 1 has been amended. Thus, claims 1-6 are pending in the present application.

The amendment to Claim 1 does not add new matter to the present application. Claim 1 previously recited a metallic soap component of from 20-25 carbon atoms, and has now been amended to recite a metallic soap component of 20 to 24 carbon atoms. Entry of the present amendment is respectfully requested.

Examiner Interview

The Applicants would like to thank the Examiner for the interview conducted on July 29, 2005. At the interview the Examiner agreed to consider an amended claim set which recites a metallic soap component of from 20-24 carbon atoms in claim 1. As discussed at the interview, the claims would then directly correspond with the data presented in the Seki Declaration included herewith and described below. Accordingly, claim 1 is amended in this paper to recite a metallic soap component of from 20-24 carbon atoms.

Claim rejections

Claims 1-6 stand rejected under 35 U.S.C §103(a) as unpatentable over Sakai et al. (U.S. Patent No. 5,183,843). The Examiner first asserts that it would have been obvious to have employed a metal salt of behenic acid based on the disclosure of Sakai. The Examiner further asserts that it would have been obvious to have employed a metal salt of an acid with 25 carbon atoms, since Sakai teaches that metal salts with 26 carbon atoms can be used. For the following reasons, this rejection is respectfully traversed.

The Sakai reference includes a broad teaching of a large number of fatty acids, behemic acid among them, that can be used with their invention. However Sakai does not disclose any examples of compositions that utilize metal salts of an acid with 20-24 carbon atoms. Sakai also specifically teaches and emphasizes that aliphatic carboxylic acids of 26-32 carbon atoms are to be used with their invention. See, e.g., Sakai col. 2, lines 32-36. All of the working examples and claims in Sakai utilize metal acid salts in this carbon atom range.

However, the Examiner asserts in the Office Action dated, March 7, 2005, at page 3:

When the claimed range and prior art range are very similar (i.e., 25 versus 26), the range of the prior art establishes prima facie obviousness because one of ordinary skill in the art would have expected the similar ranges to have the same properties. In re Peterson, 65 USPQ 1379. Applicants' reliance on the experimental data of record comparing a metal salt of an acid having 28 carbons with one derived from an acid having 22 carbons is not probative of unexpected results for the claims as presently recited.

Accordingly, included with the present Amendment, Applicants submit a Declaration from Mr. Seki. Mr. Seki's Declaration establishes that a composition comprising a metal salt of an aliphatic carboxylic acid of 20-24 carbon atoms show unexpected results over the closest prior art.

In the Declaration, data is presented from Reference Experiment I, which uses a metal acid salt of 20 carbon atoms, Reference Experiment II, which uses a metal acid salt of 24 carbon atoms, and from Reference Experiment III, which uses a metal acid salt of 26 carbon atoms.

The results of these three reference Experiments are shown in Table AA of the Declaration, and are also shown in Table BB (Exhibit I) included with this Amendment. Table BB further includes Examples 1-4, and Comparative Examples 1-4, from the Applicants' Specification for comparison.

The data presented in the Declaration demonstrates that Reference Experiment II, which uses an acid metal salt of 24 carbon atoms, has superior flowability (flow length) when compared to Experiment III, which uses an acid metal salt of 26 carbon atoms.

In addition, Reference Experiment I, which uses an acid metal salt of 20 carbon atoms, shows good mold releasing properties (shot stability (AA)). Whereas, Comparative Example 1, which uses an acid metal salt of 18 carbon atoms, shows poor mold releasing properties (shot stability (BB)).

Therefore, by using an acid metal salt within the claimed range of 20-24 carbon atoms, the polyamide resin compositions of the present invention can simultaneously achieve higher flowability, and good mold releasing properties. It is respectfully asserted that the claimed range of 20-24 carbon atoms of new claim 7 is clearly demonstrated to be patentable over Sakai by the Seki Declaration. Unexpected benefits, specifically, an optimum combination of high flowability and good mold releasing properties is directly demonstrated. This is neither taught nor suggested by the prior art. One skilled in the art would not be apprised of polyamide resin compositions that achieve this balance of physical properties based on the teachings of Sakai.

In light of the above arguments and Declaration, it is respectfully submitted that all of the pending claims are now allowable. Withdrawal of the rejection is respectfully requested.

Conclusion


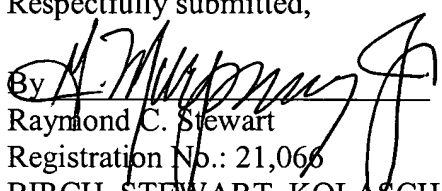
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Raymond C. Stewart (Reg. No. 21,066) at the telephone number below.

Pursuant to 37 C.F.R. 1.17 and 1.136(a), the Applicants respectfully petition for a second (2) month extension of time for filing a reply in connection with the present application, and the required fee of \$330.00 is attached. An Amendment, Petition for One Month Extension of Time and appropriate fee were filed on July 7, 2005.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: August 2, 2005

Respectfully submitted,

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Attachment: Exhibit I

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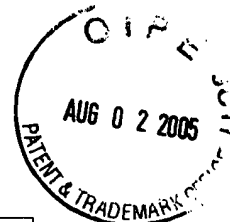
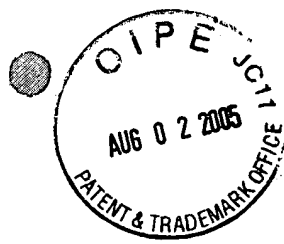


Table BB

Evaluation item	Type of PA	Ex. 1	Ex. 2	Ex. 3	Ex. 4	Ref. Exp. I	Ref. Exp. II	Ref. Exp. III	Comp. Ex. 1	Comp. Ex. 2	Comp. Ex. 3	Comp. Ex. 4	Comp. Ex. 5
		PA6T /66	PA6T /66	PA6T /66	PA6T /66	PA6T /66	PA6T /66	PA6T /66	PA6T /66	PA6T /66	PA6T /66	PA6T /66	PA6T /66
Polyamide resin composition	Amount of PA (part(s) by weight)	100	100	100	100	100	100	100	100	100	100	100	100
	Type and amount (part(s) by weight) of metallic soap												
	Li-Beh(22 carbon atoms)	0.5	1	-	0.5				-	-	-	-	-
	Mg-Beh(22 carbon atoms)	-	-	1	0.5				-	-	-	-	-
	Li-St(18 carbon atoms)	-	-	-					1	-	-	-	-
	Na-Mon(28 carbon atoms)	-	-	-					-	1	-	-	-
	Ca-Mon(28 carbon atoms)	-	-	-					-	-	1	-	-
	Li-Ara(20 carbon atoms)					1							
	Li-Lig(24 carbon atoms)					1							
	Li-Cer(26 carbon atoms)							1					
Evaluation item	Polyethylene oxide (part(s) by weight)	-	-	-	-				-	-	-	1	-
	Aliphatic ester (part(s) by weight)	-	-	-	-				-	-	-	-	1
	Flow length (mm)	81	84	88	85	90	80	76	94	75	70	63	56
	Mold release power (kg/cm ²)	37	36	35	30	41	31	27	45	26	25	22	24
	20th shot												
	50th shot	37	39	37	32	45	30	27	57	27	25	21	24
	Shot stability	AA	AA	AA	AA	AA	AA	AA	BB	AA	AA	AA	AA

Li-Beh: lithium behenate, Mg-Beh: magnesium behenate, Li-St: lithium stearate, Na-Mon: sodium montanate, Ca-Mon: calcium montanate, Li-Ara: Lithium arachinate, Li-Lig: Lithium lignocerate, Li-Cer: Lithium cerotinate, polyethylene oxide: ET132 (available from Clariant Japan K.K.), aliphatic ester: PED191 (available from Clariant Japan K.K.)

Appl. No. 10/607,519 EXHIBIT I
Docket No. 1155-0271P



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicant: Masahiro SAWADA et al. Conf.: 6031

Appl. No.: 10/607,519 Group: 1711

Filed: June 27, 2003 Examiner: A. L. WOODWARD

For: POLYAMIDE RESIN COMPOSITION AND MOLDED ARTICLE THEREOF

The Honorable Commissioner of
Patents and Trademarks
Washington, D. C. 20231

DECLARATION

I, Masashi Seki, declare and state that:

1. In March, 1989, I was graduated from Technology Department of Kanagawa University, and received a Bachelor's degree from the same university.

In March, 1991, I was graduated from Graduate School of Technology Department of Kanagawa University, and received a Master's degree of Engineering from the same university.

Since April, 1991, I have been an employee of Mitsui Chemicals INC., and till the present time, I have been engaged in Functional Polymeric Materials Laboratory.

2. I am familiar with the invention described in the specification of the above-identified application.

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3. I have carried out the following Experiments in order to show the superior and unexpected results of the present invention.

Experiments I and II and Comparative Experiment III:

Polyamide resin compositions were prepared in the same manner as in Example 1 except that the type and the amount of the metallic soaps (component (B)) set forth in the following Table AA were used. The result are shown together in Table AA.

Table AA

			Ref. Exp. I	Ref. Exp. II	Ref. Exp. III (comparison)
Polyamide resin composition	Type of PA		PA6T /66	PA6T /66	PA6T /66
	Amount of PA (part(s) by weight)		100	100	100
	Type and amount (part(s) by weight) of metallic soap	Li-Ara (20 carbon atoms)	1		
		Li-Lig (24 carbon atoms)		1	
		Li-Cer (26 carbon atoms) C			1
Evaluation item	Flow length (mm)		90	80	76
	Mold release power (kg/cm ²)	20th shot	41	31	27
		50th shot	45	30	27
	Shot stability		AA	AA	AA

Li-Ara: Lithium arachinate, Li-Lig: Lichium lignocerate, Li-Cer: Lithium cerotinate

From the results of the above Reference Experiments, I conclude that the polyamide resin compositions of the present invention could be achieved simultaneous higher flowability and mold releasing properties.

4. The undersigned declares further that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

June 27, 2005
Date

Masashi Seki
Masashi Seki

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